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Title: Series Alloys With Improved Corrosion Properties and Methods for  
Their Manufacture and Use  
Serial No: Unassigned  
First Named Inventor: Mark C. Carroll  
Docket No: 37882-0025

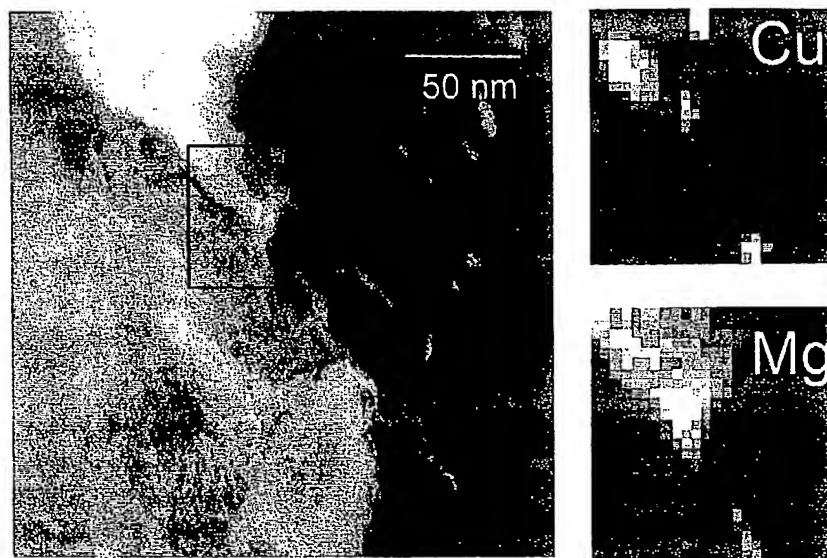


Figure 1

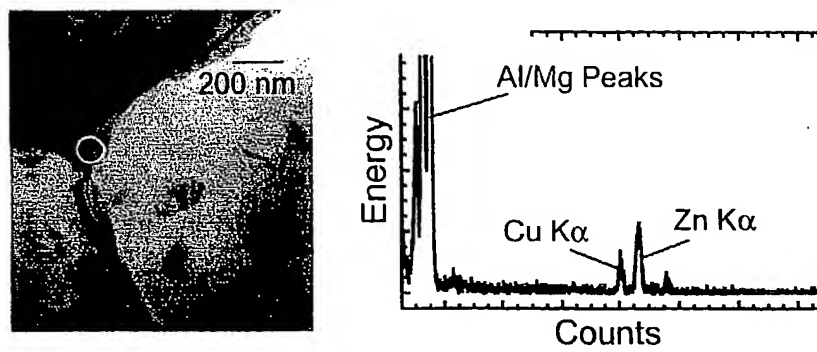


Figure 2



Al



Mg

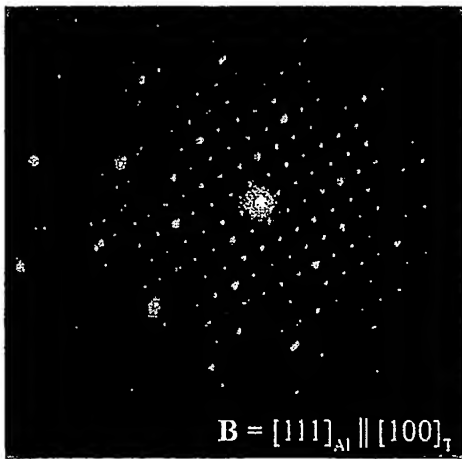


Zn

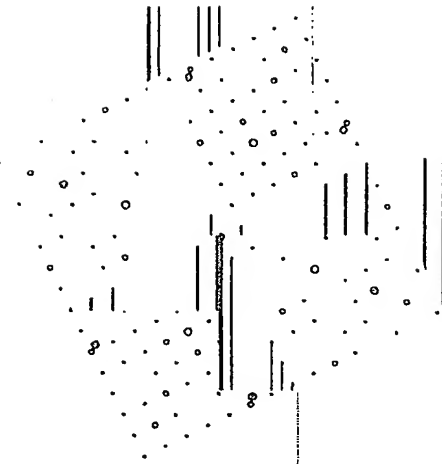


Cu

Figure 3



(a)

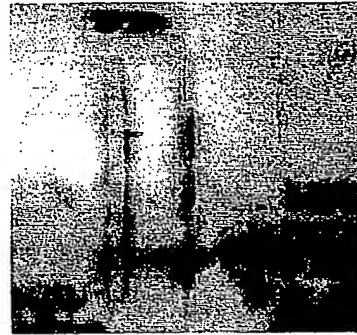


(b)

Figure 4



(a)



(b)

Figure 5

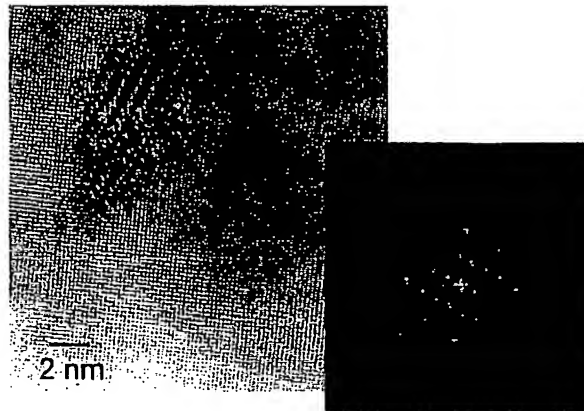


Figure 6

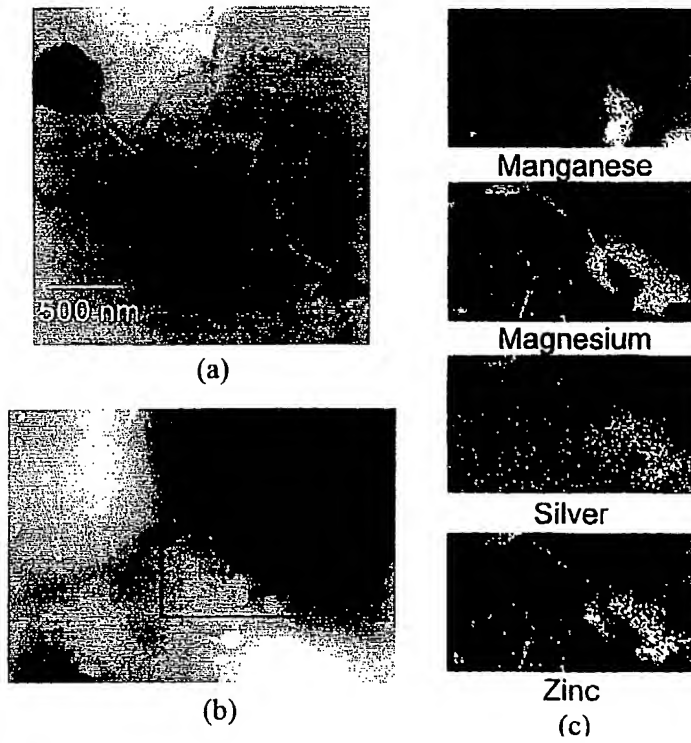


Figure 7 :

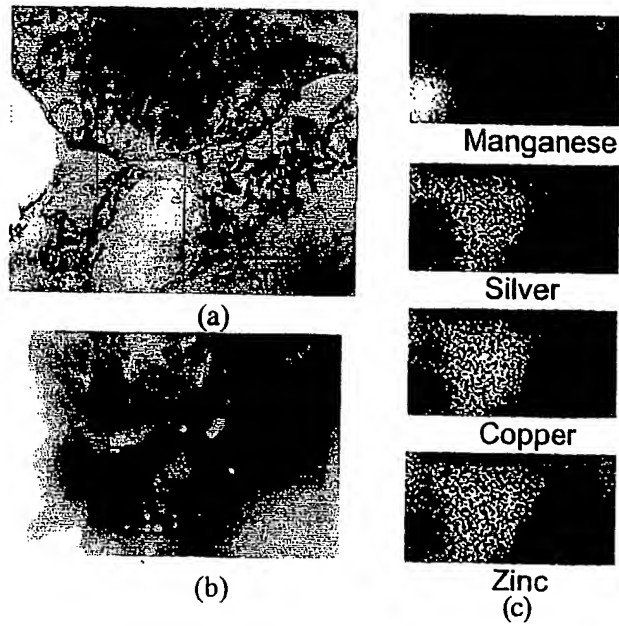


Figure 8

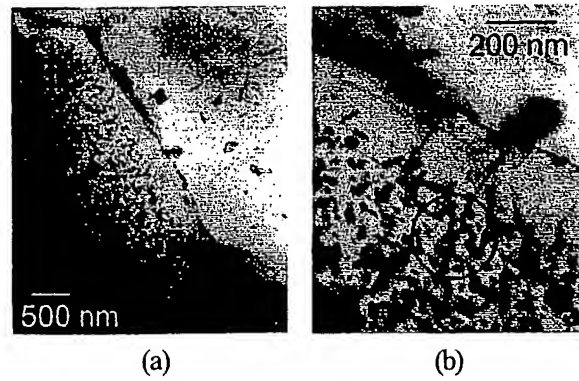


Figure 9



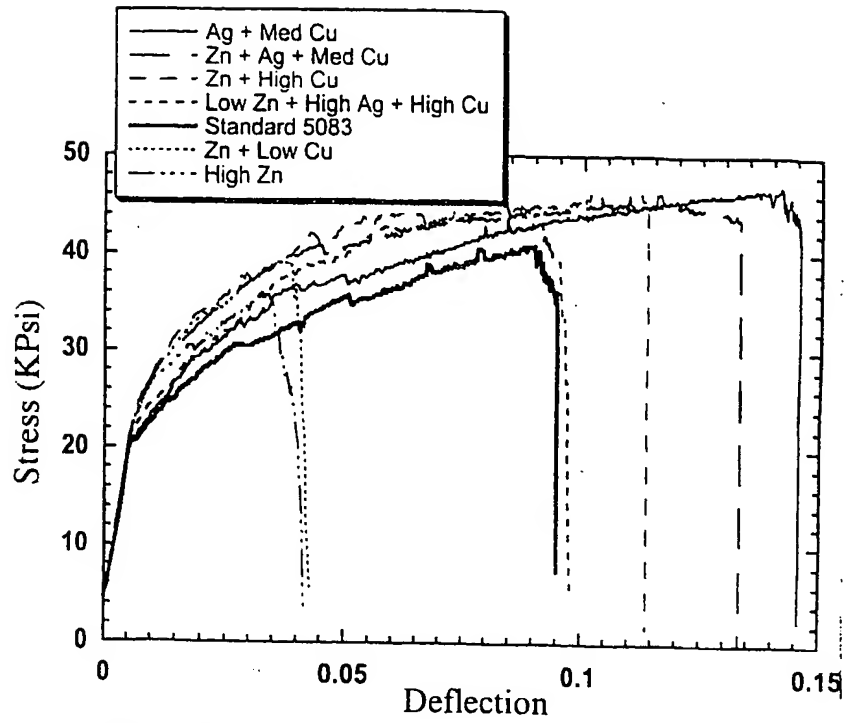


Figure 10

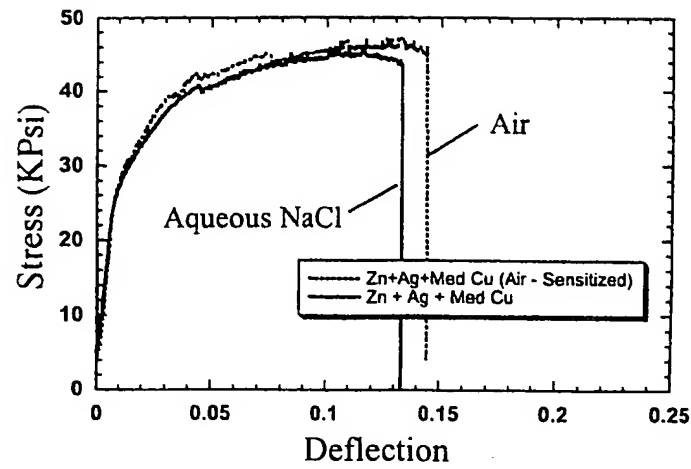


Figure 11

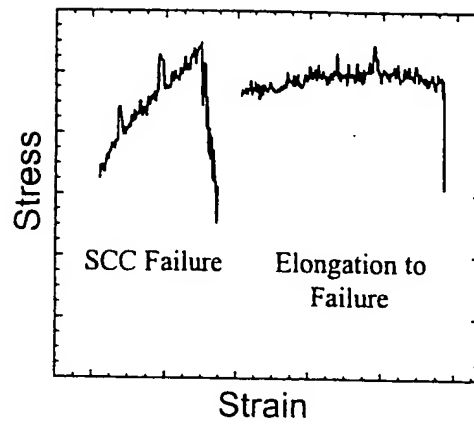


Figure 12

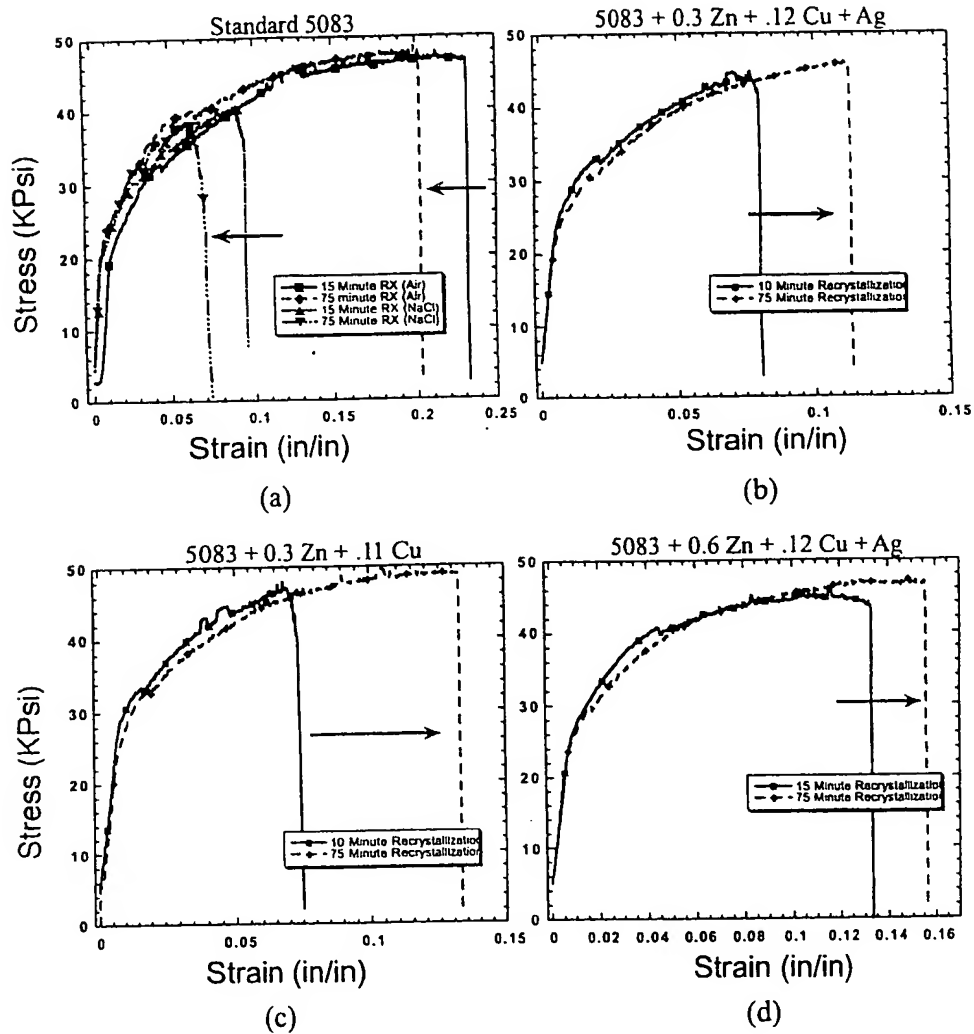


Figure 13

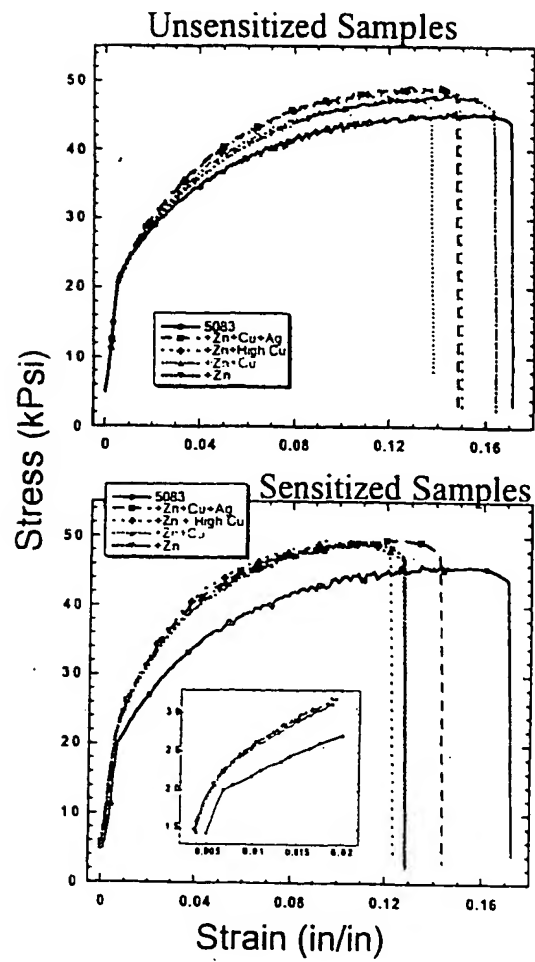


Figure 14

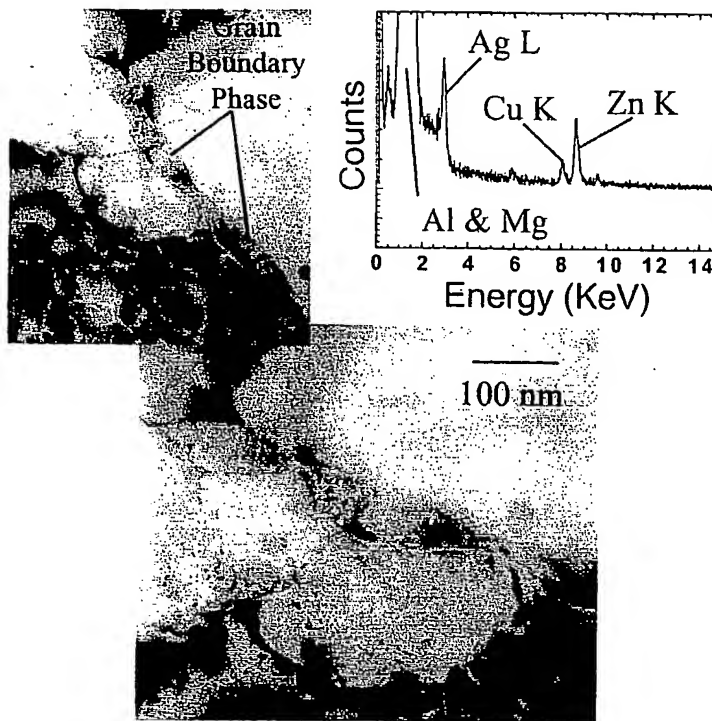


Figure 15

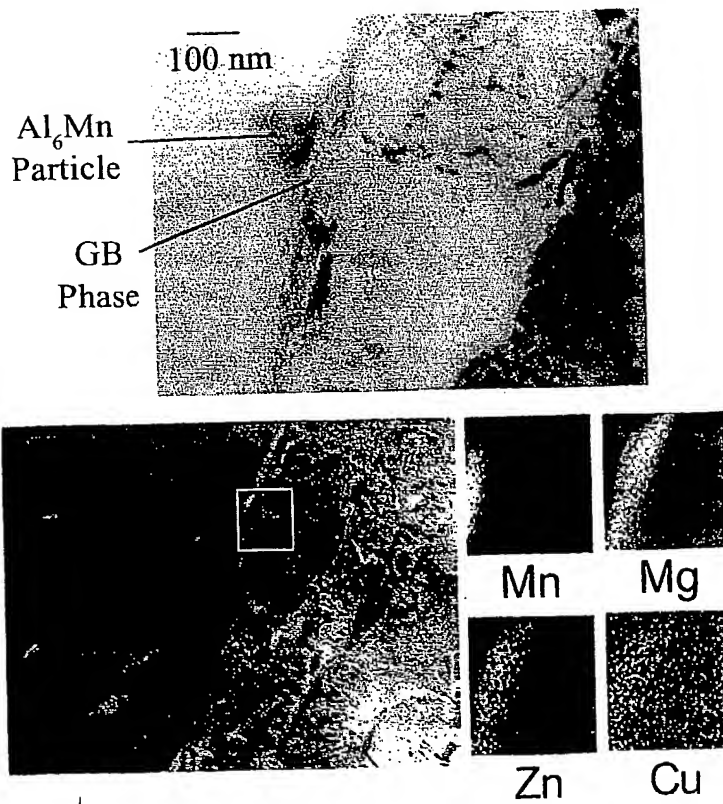


Figure 16

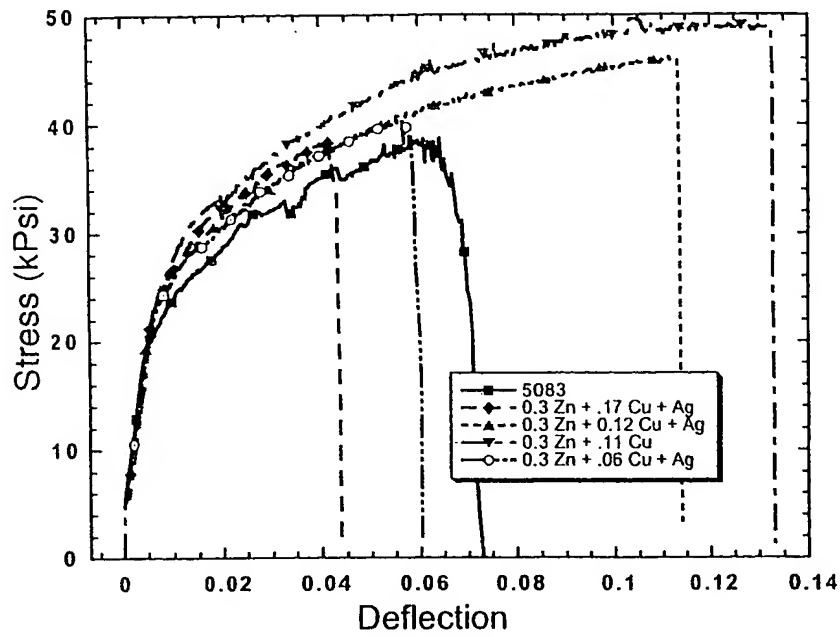


Figure 17

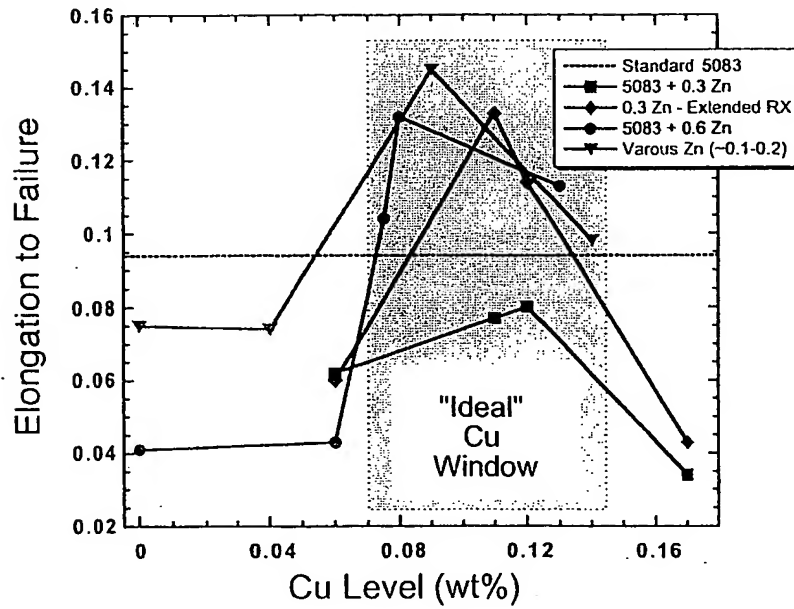


Figure 18



**Al-Mg-Zn-Cu precipitates**

*SEM micrographs obtained in Back Scattered Electron (BSE) mode*

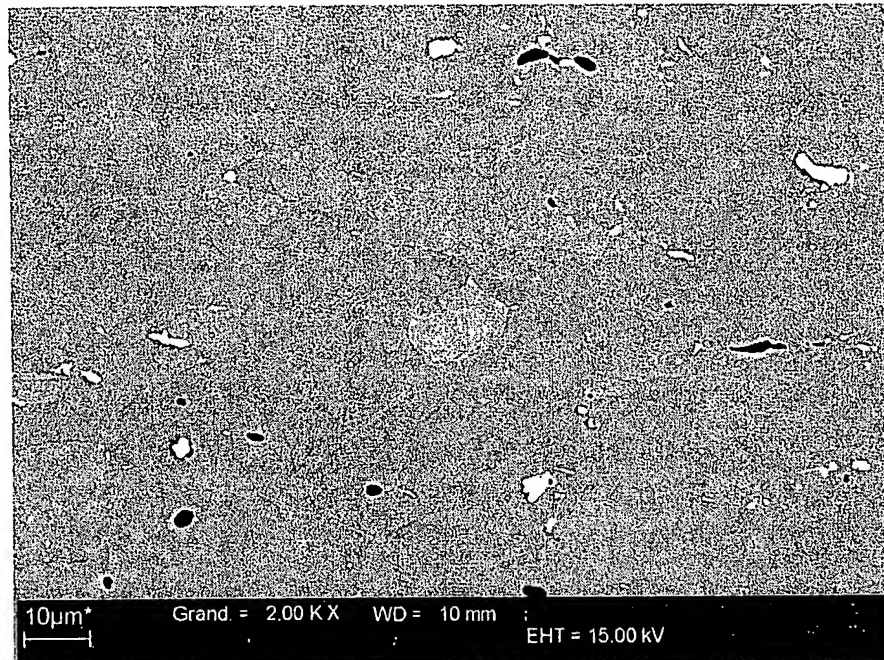


Fig 19 a)

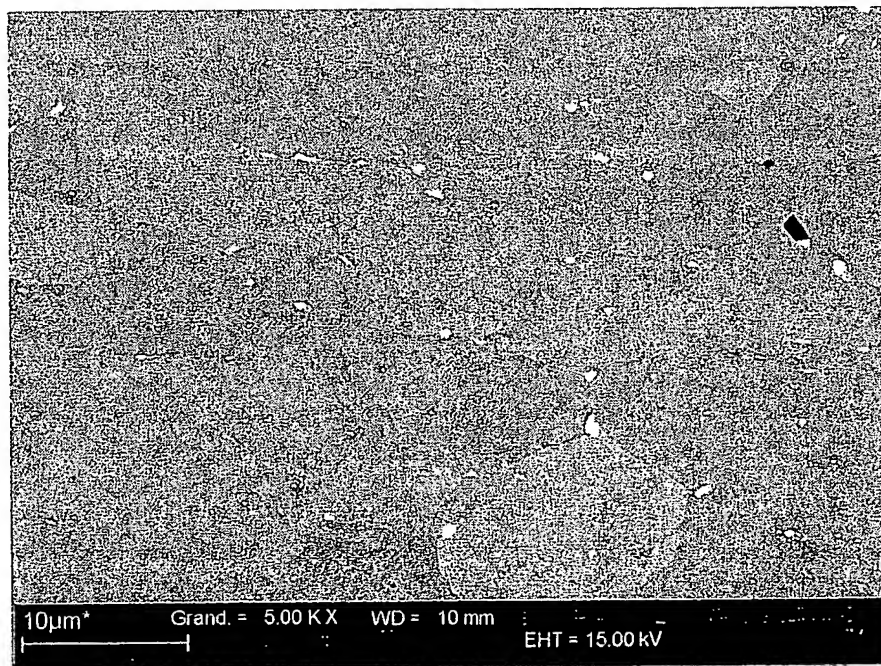
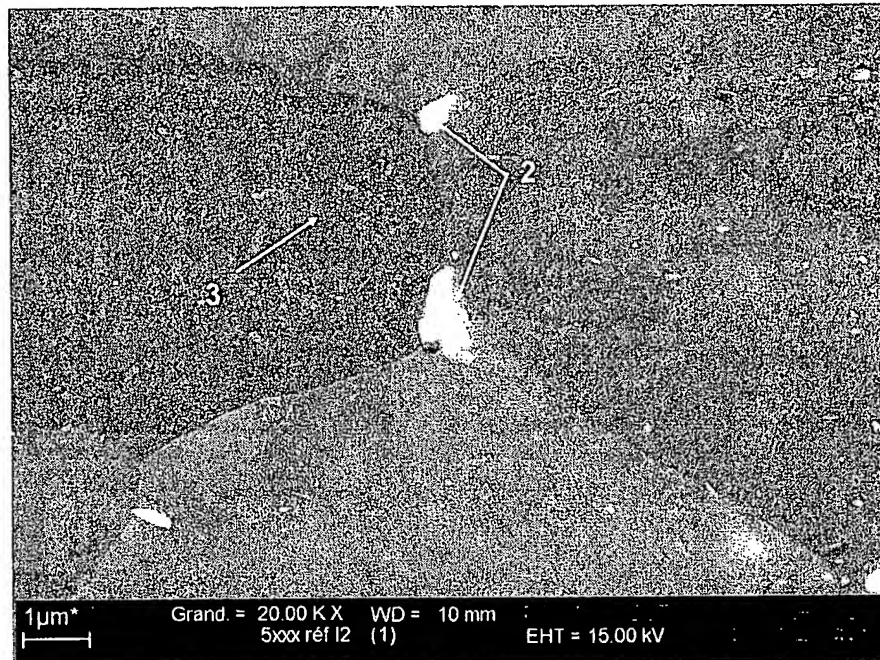


Fig. 19b

## Desensitization of 5xxx alloys to intergranular corrosion

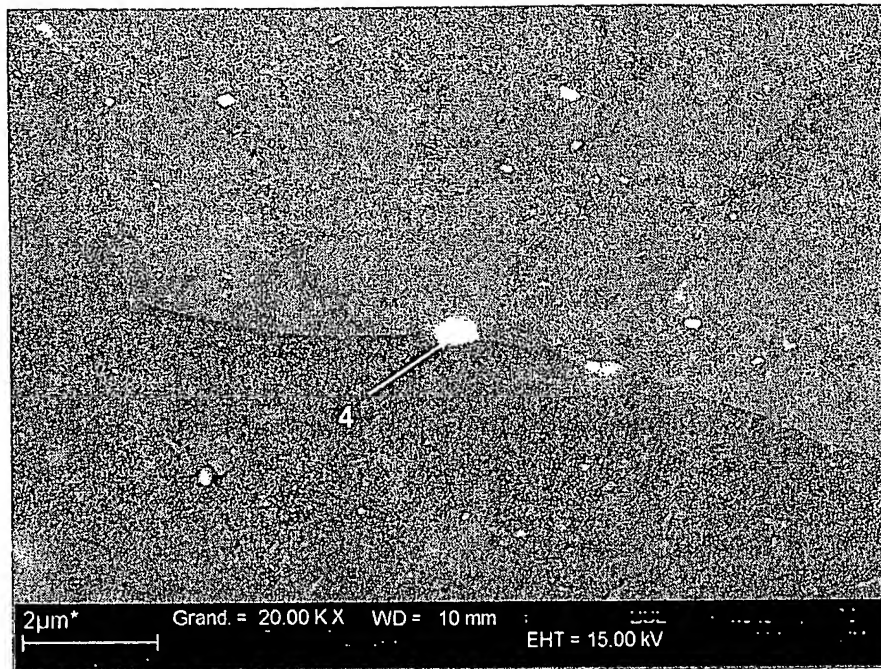
### Search for Al-Mg-Zn-Cu precipitates

*SEM micrographs obtained in Back Scattered Electron (BSE) mode*



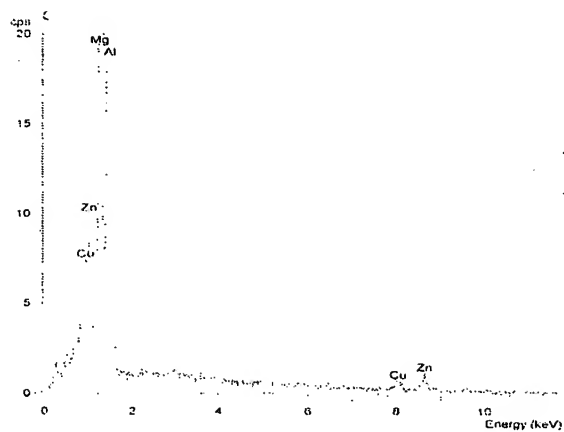
- 1 Al-Mg-Zn-Cu precipitates
- 2 Al-Mg-Zn-Cu
- 3 Al-Mg (matrix of 5xxx alloy)

Fig. 20



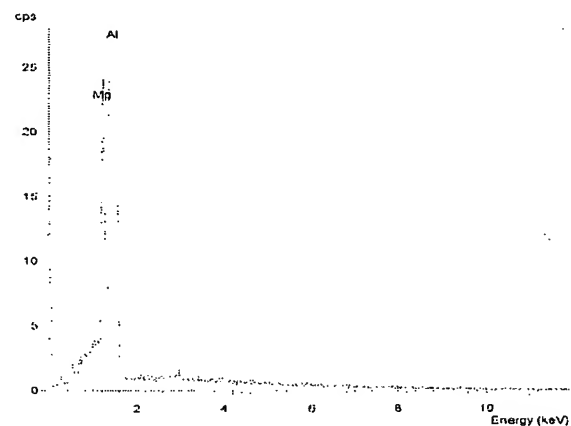
Précipité Al-Mg-Zn-Cu Al-Zn-Mg-Cu precipitate  
4 Al-Mg-Cu-Zn )

Fig. 21



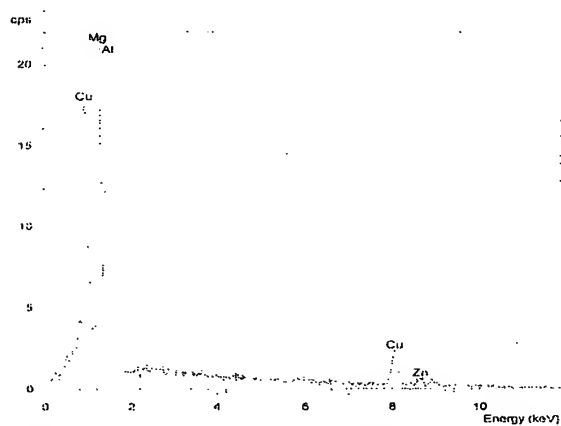
a) Spectre EDX 2

Al-Mg-Zn-Cu



b) Spectre EDX 3

Al-Mg (matrice 5xxx)



c) Spectre EDX 4

Al-Mg-Cu-Zn

Fig. 22a  
22b  
22c